Newton's Nightmare in Visual Effects

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DIGITAL DOMAIN

Where I'm Coming From...

Entertainment - Films, Video, Games
Goal:
  Maintain Willing Suspension of Disbelief
To that end:
- Software Department 10 people
- Tech Directors 15 people
- Artists: 100+ people

Reality vs. Faux Physics Round 1

Oh Brother,
Where Art Thou?

Reality vs. Faux Physics Round 2

Gran Turismo 3

Q: So how does one go about making a killer driving game?

"Set high goals. Make no compromises. Be lucky. Seriously, though, don't think how a car would behave. Think about how a car is built. Go back to the basics. Concentrate on re-creating a real-life car."

(LA Times July 26, 2001 ALEX PHAM)

Reality vs. Faux Physics Round 3

Titanic

How Much Reality?

Audience sophistication increases at the same rate as technological sophistication.

Audience expertise
- Recognizing everyday things.

Audience gullibility
- Extraordinary things.

Real World Limitations

Simulations/Renders: less than a day, 2GB.
Control: Must have it.
Simulations/Renders start from reality and head towards arbitrary control.

Example: Environmental Lighting

Initially: Faked it all.
Next: Tried Measuring it.
Now: Record it.

The Future - In Entertainment

Computer Graphics is just a tool.
Give film makers the ultimate control… be able to reproduce reality.
Must be able to simulate reality.
Faking it works for now, the future is reality… with control.